

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listing of claims in the application. Please cancel claims 30 and 31, without prejudice or disclaimer.

1-22. (Cancelled)

23. (Currently amended) A composition comprising:

(a) a population of neural cells enriched for neurosphere initiating stem cells (NS-IC) produced by:

(a1) combining a population comprising neural cells or neural-derived cells containing a fraction of NS-ICs with a reagent that recognizes a determinant on a cell surface marker recognized by monoclonal antibody AC133 or by monoclonal antibody 5E12; and

(b2) selecting and isolating those cells that bind to monoclonal antibody AC133 or monoclonal antibody 5E12 AC133⁺ or 5E12⁺ cells, thereby producing a population of cells enriched for NS-IC as compared with the population of neural cells or neural-derived cells; and wherein the selected AC133⁺ or 5E12⁺ cells are enriched in the fraction of NS-ICs as compared with the population of neural cells;

(c) introducing at least one AC133⁺ or 5E12⁺ cell to a culture medium capable of supporting the growth of NS-IC; and

(d) proliferating the AC133⁺ or 5E12⁺ cell in the culture medium.

(b) at least one monoclonal antibody selected from the group consisting of monoclonal antibody AC133 and monoclonal antibody 5E12.

24.-26. (Cancelled)

27. (Currently amended) An *in vitro* cell culture composition comprising:
- (a) a population of neural cells enriched in NS-IC, wherein the NS-IC bind to monoclonal antibody AC133 or to monoclonal antibody 5E12 and are AC133⁺ CD45⁻ cells or 5E12⁺ CD45⁻ cells; and
 - (b) a medium capable of supporting the growth of the cells; and
 - (c) at least one monoclonal antibody selected from the group consisting of monoclonal antibody AC133 and monoclonal antibody 5E12.
28. (Currently amended) An *in vitro* cell culture composition comprising:
- (a) a population of neural cells enriched in NS-IC, wherein the NS-IC bind to monoclonal antibody AC133 or to monoclonal antibody 5E12 and are AC133⁺ CD45⁻ cells or 5E12⁺ CD45⁻CD34⁻ cells; and
 - (b) a medium capable of supporting the growth of the cells; and
 - (c) at least one monoclonal antibody selected from the group consisting of monoclonal antibody AC133 and monoclonal antibody 5E12.
29. (Currently amended) An *in vitro* cell culture composition comprising:
- (a) a population of neural cells enriched in NS-IC, wherein the NS-IC bind to monoclonal antibody AC133 or to monoclonal antibody 5E12 and are CD24⁻ AC133⁺ 8G1^{-/lo} or 5E12⁺ 8G1^{-/lo} cells; and
 - (b) a medium capable of supporting the growth of the cells; and
 - (c) at least one monoclonal antibody selected from the group consisting of monoclonal antibody AC133 and monoclonal antibody 5E12.
- 30-31. (Cancelled)
32. (Currently amended) The composition of ~~claim 31~~ any one of claims 23 and 27-29, further comprising a solid support to which the NS-IC cells are attached.

33. (Currently amended) The composition of ~~claim 31~~ any one of claims 23 and 27-29, wherein the population of cells ~~has~~ comprises at least 70% ~~AC133⁺ or 5E12⁺ cells that~~ bind to monoclonal antibody AC133 or monoclonal antibody 5E12.
34. (Currently amended) The composition of ~~claim 31~~ any one of claims 23 and 27-29, wherein the population of cells ~~has~~ comprises at least 90% ~~AC133⁺ or 5E12⁺ cells that~~ bind to monoclonal antibody AC133 or monoclonal antibody 5E12.
35. (Currently amended) The composition of ~~claim 31~~ any one of claims 23 and 27-29, wherein the population of cells that bind to monoclonal antibody AC133 or monoclonal antibody 5E12 ~~AC133⁺ or 5E12⁺ cells~~ is a substantially pure population.
36. (Currently amended) The composition of ~~claim 31~~ any one of claims 23 and 27-29, wherein the medium comprises a serum-free medium containing one or more ~~predetermined~~ growth factors effective for inducing multipotent neural stem cell proliferation.
37. (Currently amended) The composition of ~~claim 31~~ any one of claims 23 and 27-29, wherein the medium ~~further contains~~ comprises a growth factor selected from the group consisting of leukocyte inhibitory factor (LIF), epidermal growth factor (EGF), basic fibroblast growth factor (FGF-2), and combinations thereof.
38. (Currently amended) The composition of ~~claim 31~~ any one of claims 23 and 27-29, wherein the medium ~~further~~ comprises a neural survival factor, NSF.
39. (Currently amended) The composition of any one of claims 23 and 27-29, wherein the ~~NS-IC~~ neural cells are human.
- 40.-43. (Cancelled)